To know the Hour and Minute of the Sun-rising and Setting at any time of the year, in any Place of the habitable World.

By HENRY PHILIPS.

THE time of Sun-rising and Setting is exactly set down in the Fifth Colume of the Seaman's Kalender, for every day of the Year for the Latitude of London; So that by knowing the day of the Month, you may know the time of Sun-rising and Setting without further trouble; Now if you double the time of Sun-rising, you may know the length of the Night; Likewise double the time of the Sun-setting, and it shews the length of the Day. This is so plain that it needs no Example.

But because the Sun-rising and Setting doth differ in every Latitude, therefore for the use of the Seamen I have set down this Table, by the which knowing the Place of the Sun, and the Latitude of the Place you are in, you may know the time of
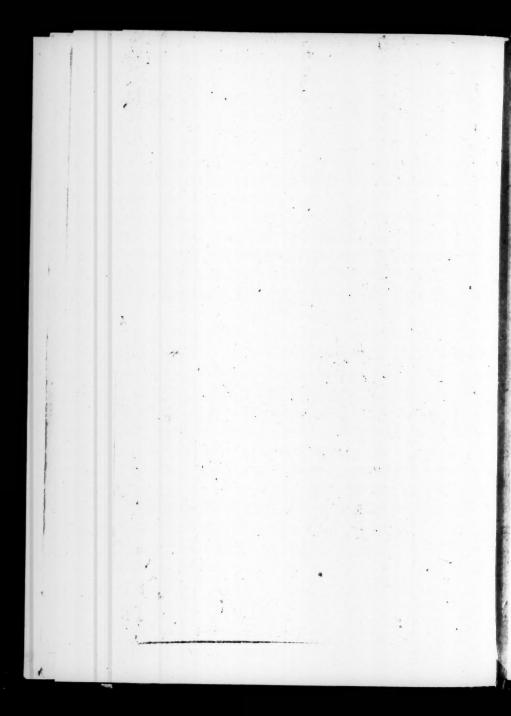
Sun-

A Table of the Suns Rising and Setting in all places to the Latitude of 60 degrees.

The Latitude or Height of the Pole.

Setting	Day	Day	Rising	5 H.M.	10 H.M.	15 H.M.	20 H.M.	25 H.M.	30 H.M.	35 H.M.	40 H.M.
January	11	11	December	5 51	5 42	5 33	5 24	5 13	5 2	4 49	4 34
	17	5		5 51	5 42	5 33	5 24	5 13	5 3	4 50	4 35
	23	29		5 52	5 43	5 33	5 25	5 14	5 4	4 51	4 36
	28	23		5 52	5 43	5 34	5 25	5 16	5 6	4 53	4 40
	3	17		5 53	5 44	5 35	5 27	5 18	5 8	4 56	4 43
February	9	11	November	5 53	5 45	5 37	5 39	5 21	5 11	5 0	4 48
	15	6		5 54	5 46	5 39	5 31	5 23	5 15	5 4	4 54
	21	31		5 54	5 48	5 41	5 33	5 26	5 19	5 10	5 8
	27	25		5 55	5 49	5 43	5 36	5 30	5 23	5 15	5 6
	2	19		5 56	5 50	5 45	5 39	5 34	5 28	5 21	5 13
March	8	13	October	5 56	5 52	5 47	5 43	5 38	5 33	5 28	5 21
	14	7		5 57	5 53	5 49	5 45	5 42	5 38	5 34	5 28
	20	1		5 58	5 55	5 52	5 49	5 47	5 44	5 41	5 36
	26	25		5 58	5 57	5 55	5 52	5 51	5 49	5 47	5 44
	4	18		5 59	5 58	5 57	5 56	5 55	5 54	5 53	5 52
April	10	12	September	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0
	16	6		6 1	6 2	6 3	6 4	6 5	6 6	6 7	6 8
	22	31		6 2	6 3	6 5	6 7	6 9	6 11	6 13	6 16
	28	25		6 2	6 5	6 8	6 11	6 13	6 16	6 19	6 24
	3	19		6 3	6 7	6 11	6 15	6 18	6 22	6 26	6 32
May	9	13	August	6 4	6 8	6 13	6 17	6 22	6 27	6 32	6 39
	15	6		6 4	6 10	6 15	6 21	6 26	6 31	6 39	6 47
	22	31		6 5	6 11	6 17	6 24	6 30	6 37	6 45	6 54
	28	25		6 6	6 12	6 19	6 27	6 34	6 41	6 50	7 0
	4	19		6 6	6 14	6 21	6 29	6 37	6 45	6 56	7 6
June	10	12	Jul	6 7	6 15	6 23	6 31	6 31	6 39	7 0	7 12
	17	6		6 7	6 16	6 25	6 33	6 42	6 52	7 4	7 17
	23	30		6 8	6 17	6 26	6 35	6 44	6 54	7 7	7 21
	29	23		6 8	6 17	6 27	6 35	6 46	6 56	7 9	7 24
	4	17		6 9	6 18	6 27	6 36	6 47	6 57	7 10	7 25
	11	11		6 9	6 18	6 27	6 36	6 47	6 58	7 11	7 26
Suns-Rising				5	10	15	20	25	30	35	40

In South Latitude.

Here enter with the day of the month to find the Suns setting.	A Table of the Suns Rifing and Setting in all places to the Latitude of 60 degrees. The Latitude or Height of the Pole.							
	5	10	15	20	25	30	35	40
	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.
11 11 — December / De	5 51	5 42	5 33	5 24	5 13	5 2	4 49	4 34
17 5	5 51	5 42	5 33	5 24	5 13	5 3	4 50	4 35
22 29	5 52	5 43	5 33	5 25	5 14	5 4	4 51	4 36
28 23	5 52	5 43	5 34	5 25	5 16	5 6	4 53	4 40
3 17 — November	5 53	5 44	5 35	5 27	5 18	5 8	4 56	4 43
9 11 — January	5 53	5 45	5 37	5 29	5 21	5 11	5 0	4 48
15 6	5 54	5 46	5 39	5 31	5 23	5 15	5 4	4 54
21 31 — October	5 54	5 48	5 41	5 33	5 26	5 19	5 10	5 8
27 25	5 55	5 49	5 43	5 36	5 30	5 23	5 15	5 6
2 19	5 56	5 50	5 45	5 39	5 34	5 28	5 21	5 13
8 13	5 56	5 52	5 47	5 43	5 38	5 33	5 28	5 21
14 7	5 57	5 53	5 49	5 45	5 42	5 38	5 34	5 28
20 1 — February / September	5 58	5 55	5 52	5 49	5 47	5 44	5 41	5 36
26 25	5 58	5 57	5 55	5 52	5 51	5 49	5 47	5 44
4 18	5 59	5 58	5 57	5 56	5 55	5 54	5 53	5 52
10 12 — March	6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0
16 6	6 1	6 2	6 3	6 4	6 5	6 6	6 7	6 8
22 31	6 2	6 3	6 5	6 7	6 9	6 11	6 13	6 16
28 25	6 2	6 5	6 8	6 11	6 13	6 16	6 19	6 24
3 19 — April	6 3	6 7	6 11	6 15	6 18	6 2.	6 26	6 32
9 13 — August	6 4	6 8	6 13	6 17	6 22	6 2?	6 32	6 39
15 6	6 4	6 10	6 15	6 21	6 26	6 31	6 39	6 47
22 31	6 5	6 11	6 17	6 24	6 30	6 37	6 45	6 54
28 25	6 6	6 12	6 19	6 27	6 34	6 41	6 50	7 0
4 19 — May	6 6	6 14	6 21	6 29	6 37	6 45	6 56	7 6
10 12 — July	6 7	6 15	6 23	6 31	6 39	6 48	7 0	7 12
17 6	6 7	6 16	6 25	6 33	6 42	6 52	7 4	7 17
23 30	6 8	6 17	6 26	6 35	6 44	6 54	7 7	7 21
29 23	6 8	6 17	6 27	6 35	6 46	6 56	7 9	7 24
4 17 — June	6 9	6 18	6 27	6 36	6 47	6 57	7 10	7 25
11 11	6 9	6 18	6 27	6 36	6 47	6 58	7 11	7 26
Suns-Rifing	5	10	15	20	25	30	35	40

In South Latitude.

The Latitude or Height of the Pole.

44	47	50	52	54	56	58	60	Here enter with the day of the month to find the Suns Rising.
H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	H.M.	
4 21	4 9	3 53	3 45	3 33	3 20	3 4	2 44	Ju 11 · 11 ne
4 21	4 10	3 56	3 46	3 34	3 21	3 5	2 46	5 · 17
4 23	4 12	3 59	3 49	3 37	3 24	3 9	2 51	29 · 23
4 27	4 16	4 3	3 53	3 43	3 30	3 16	2 59	23 · 30
4 31	4 21	4 9	4 0	3 50	3 38	3 25	3 9	17 · 6 July
4 37	4 27	4 16	4 8	3 56	3 48	3 36	3 22	May 10 · 12
4 43	4 34	4 24	4 19	4 8	3 59	3 48	3 35	4 · 19
4 50	4 42	4 33	4 26	4 19	4 11	4 1	3 50	28 · 25
4 58	4 51	4 43	4 37	4 30	4 23	4 15	4 5	22 · 31
5 6	5 0	4 53	4 48	4 43	4 36	4 29	4 21	15 · 6
5 15	5 10	5 4	5 0	4 55	4 50	4 44	4 37	April 9 · 13 August
5 24	5 19	5 15	5 11	5 8	4 4	4 59	4 54	3 · 19
5 33	5 29	5 26	5 23	5 21	5 18	5 14	5 16	28 · 25
5 42	5 40	5 37	5 36	5 34	5 33	5 29	5 27	22 · 31
5 51	5 50	5 49	5 48	5 47	5 46	5 4	5 43	16 · 6 September
6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	10 · 12
6 9	6 10	6 11	6 12	6 13	6 14	6 15	6 17	4 · 18
6 18	6 20	6 23	6 24	6 26	6 28	6 31	6 33	25 · 25
6 27	6 31	6 34	6 37	6 39	6 42	6 46	6 50	20 · 1 October
6 36	6 41	6 45	6 49	6 52	6 56	7 1	7 6	February 14 · 7
6 45	6 50	6 56	7 0	7 5	7 10	7 16	7 23	8 · 13
6 54	7 0	7 7	7 12	7 17	7 24	7 31	7 39	2 · 19
7 1	7 9	7 17	7 23	7 30	7 37	7 45	7 55	27 · 25
7 10	7 14	7 27	7 34	7 41	7 49	7 59	8 10	21 · 31
7 17	7 26	7 36	7 41	7 52	8 1	8 12	8 25	15 · 6
7 23	7 33	7 44	7 52	8 2	8 12	8 24	8 38	January 9 · 11 November
7 29	7 39	7 51	8 0	8 10	8 22	8 35	8 51	3 · 17
7 33	7 44	7 57	8 7	8 17	8 30	8 44	9 1	28 · 23
7 37	7 48	8 1	8 11	8 23	8 36	8 51	9 9	23 · 29
7 39	7 50	8 4	8 14	8 26	8 39	8 55	9 14	December 17 · 5
7 39	7 51	8 5	8 15	8 27	8 42	8 56	9 16	11 · 11
44	47	50	52	54	56	58	60	Suns Setting

A Table of the Suns Rising and Setting in all places to the Latitude of 60 degrees.

The Latitude or Height of the Pole.

44 H.M.	47 H.M.	50 H.M.	52 H.M.	54 H.M.	56 H.M.	58 H.M.	60 H.M.			
4 21	4 9	3 53	3 45	3 33	3 20	3 4	2 44	11	11	
4 21	4 10	3 56	3 46	3 34	3 21	3 5	2 46	5	17	June / July
4 23	4 12	3 59	3 49	3 37	3 24	3 9	2 51	29	23	
4 27	4 16	4 3	3 53	3 43	3 30	3 16	2 59	23	30	
4 31	4 21	4 9	4 0	3 50	3 38	3 25	3 9	17	6	
4 37	4 27	4 16	4 8	3 58	3 48	3 36	3 22	10	12	
4 43	4 34	4 24	4 19	4 8	3 59	3 48	3 35	4	19	May / August
4 50	4 42	4 33	4 26	4 19	4 11	4 1	3 50	28	25	
4 58	4 51	4 43	4 37	4 30	4 23	4 15	4 5	22	31	
5 6	5 0	4 53	4 48	4 43	4 36	4 29	4 21	15	6	
5 15	5 10	5 4	5 0	4 55	4 50	4 44	4 37	9	13	
5 24	5 19	5 15	5 11	5 8	4 4	4 59	4 54	3	19	April / September
5 33	5 29	5 26	5 23	5 21	5 18	5 14	5 16	28	25	
5 42	5 40	5 37	5 36	5 34	5 33	5 29	5 27	22	31	
5 51	5 50	5 49	5 48	5 47	5 46	5 4	5 43	16	6	
6 0	6 0	6 0	6 0	6 0	6 0	6 0	6 0	10	12	
6 9	6 10	6 11	6 12	6 13	6 14	6 15	6 17	4	18	March / October
6 18	6 20	6 23	6 24	6 26	6 28	6 31	6 33	26	25	
6 27	6 31	6 34	6 37	6 39	6 42	6 46	6 50	20	1	
6 36	6 41	6 45	6 49	6 52	6 56	7 1	7 6	14	7	
6 45	6 50	6 56	7 0	7 5	7 10	7 15	7 23	8	13	
6 54	7 0	7 7	7 12	7 17	7 24	7 3. 7	7 39	2	19	February / November
7 1	7 9	7 17	7 23	7 30	7 37	7 45	7 55	27	25	
7 10	7 14	7 27	7 34	7 41	7 49	7 59	8 10	21	31	
7 17	7 26	7 36	7 41	7 52	8 1	8 12	8 25	15	6	
7 23	7 33	7 44	7 52	8 2	8 12	8 24	8 38	9	11	
7 29	7 39	7 51	8 0	8 10	8 22	8 35	8 51	3	17	January / December
7 33	7 44	7 57	8 7	8 17	8 30	8 44	9 1	28	23	
7 37	7 48	8 1	8 11	8 23	8 36	8 51	9 9	..	29	
7 39	7 50	8 4	8 14	8 26	8 39	8 55	9 14	17	5	
7 39	7 51	8 5	8 15	8 27	8 40	8 56	9 16	11	11	

44	47	50	52	54	56	58	60	Suns Setting

In South Latitude.

Sun-rising and setting in any Place of the habitable world.

Because the Day of the Month is more readily known to some, than the Sine which the Sun is in; Therefore I have on the Sides of the Table, set down the Days of the Months; the use whereof is the same with the other. For if you find the day of the Month, on the Table; and the Latitude you are in at the head of the Table, in the square meeting of these two, you shall find the Suns-rising or Setting, as is before.

For Example.

The 21 of January in the Latitude of 40 Degrees, the Sun sets at 5 hours 0 min. the difference of time is 6. min. and the difference of the Days are 6; that is, 1 min. for every day. So that if you would know the time of Sun-set on the 24 day it will be at 5 hour 3 min.

Again, if you would know the time of Sun-set on the 24 of January, in the Latitude of 42 degrees. Here is neither the Day of the Month, nor the Latitude to be found exactly; but you find that the 21 of Jan. in the Latitude of 40 the Sun sets at Five hours 0 min. And the 27 of Jan. in the Latitude of 44. the Sun sets at 4 hour. 58 min. Now because the Latitude of 42. is the middle between 40. and 44. and likewise the 24 Day, the midst between the 21, and 27 dayes. Take the middle time between the two times set down in the Table, which is 4 H. 59 M. which is the time of Sun set, on that day, in the Latitude desired.

F I N I S.